

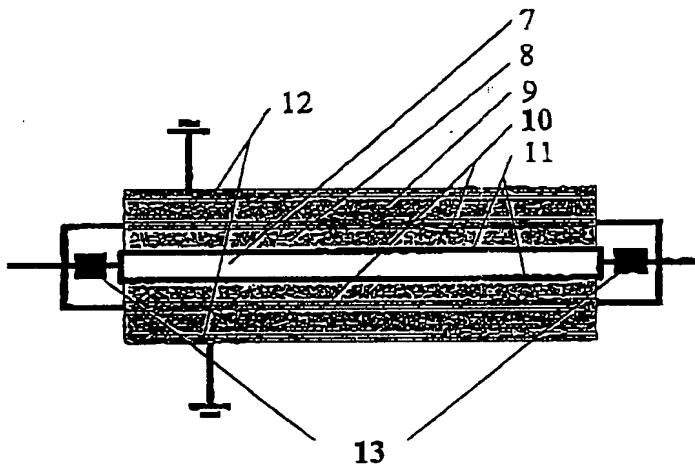
PCT

WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 7 : H01H	A2	(11) International Publication Number: WO 00/70631 (43) International Publication Date: 23 November 2000 (23.11.00)
(21) International Application Number: PCT/DK00/00227		(81) Designated States: AE, AL, AM, AT, AT (Utility model), AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, CZ (Utility model), DE, DE (Utility model), DK, DK (Utility model), DM, EE, EE (Utility model), ES, FI, FI (Utility model), GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SK (Utility model), SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).
(22) International Filing Date: 4 May 2000 (04.05.00)		
(30) Priority Data: PA 1999 00685 17 May 1999 (17.05.99) DK PA 1999 00864 17 June 1999 (17.06.99) DK		
(71) Applicant (for all designated States except US): NKT RESEARCH A/S [DK/DK]; Priorparken 878, DK-2605 Brøndby (DK).		
(72) Inventors; and		
(73) Inventors/Applicants (for US only): RASMUSSEN, Claus, Nygaard [DK/DK]; Knivholtvej 16, 1. tv., DK-2720 Værløse (DK). NIELSEN, Jørgen, Nygård [DK/DK]; Lavendelhaven 75, DK-2830 Virum (DK). ØSTERGAARD, Jens Jacob [DK/DK]; C. T. Barfodvej 11, 1. tv., DK-2000 Frederiksberg (DK).		
(74) Agent: NKT RESEARCH A/S; Priorparken 878, DK-2605 Brøndby (DK).		

(54) Title: A METHOD FOR OVERCURRENT PROTECTION IN A SUPERCONDUCTING CABLE



(57) Abstract

By a method and a superconducting cable for overcurrent protection, a current detector comprising a circuit breaker or a current limiter is inserted in series with the superconducting cable, which current detector can be constituted by a superconducting material quenching at a lower current than the cable conductor of the superconducting cable. When the current in the superconducting material gets too high, it is for a short time period fed to a cold shunt that is coupled in parallel with the cable conductors of the superconducting cable. After the short time period, the current is fed to a hot shunt that is coupled in parallel outside the cable conductors of the cable, causing heat dissipation to be effected at room temperature. By use of the method and the cable according to the invention, destruction of the cable is prevented should the superconducting cable lose its superconductivity, e.g. due to cooling failure, whereupon normal operation may soon be resumed without restoration of damage being necessary.

EXPRESS MAIL LABEL
NO.: EV 011019060 US